

**IN THE CLAIMS:**

A complete listing of the claims is set forth below. Please amend the claims as follows:

1. **(Currently Amended)** A speed cooking oven for cooking a food product by hot gas and microwave energy, comprising:

an oven cavity;

at least one cooking rack;

at least one magnetron for generating microwaves;

at least ~~one~~ two rectangular waveguides ~~chamber~~ operably associated with the at least one magnetron, the at least one waveguide ~~chamber~~ having a proximal end near the magnetron, an opposing distal end, and a longitudinal ~~chamber~~ waveguide axis;

at least one slot opening in the each waveguide ~~chamber~~ having a center point disposed along the a longitudinal ~~chamber~~ slot axis, the center point being located a selected distance from the distal end of the waveguide ~~chamber~~, the slot having a slot length along a said longitudinal slot axis that is less than 0.5 free space wavelength;

wherein the at least one slot in each waveguide is configured such that a substantially uniform microwave pattern is achieved without using a mechanical phase-altering device~~[-]~~ ;

wherein said waveguides are configured for launching microwave energy through respective slots and into the oven cavity from opposing sides of the cavity; and

wherein the oven is operable for launching hot gas into the oven cavity from said opposing sides of the cavity.

2. **(Previously Presented)** The speed cooking oven according to claim 1, wherein each slot is defined by a pair of elongated parallel sides connected at each end by semicircular ends, each slot having a vertical slot axis perpendicular to the longitudinal slot axis, such that the center point is located at the intersection of the longitudinal slot axis and the vertical slot axis.

3. **(Currently Amended)** The speed cooking oven according to claim 1, wherein each waveguide ~~chamber~~ includes first, second, and third slot ~~openings~~ slots.

4. **(Original)** The speed cooking oven according to claim 3, wherein the selected distance of the center point of the first slot opening is 0.5 of the waveguide wavelength.

5. **(Currently Amended)** The speed cooking oven according to claim 3, wherein ~~the~~ each slot has a width between about 0.25 inches and 0.35 inches.

6. **(Currently Amended)** The speed cooking oven according to claim 5, wherein the first slot is inclined relative to the longitudinal ~~chamber~~ waveguide axis, such

that the end of the first slot closest to the distal end of the waveguide is higher than the other end of the first slot.

7. **(Original)** The speed cooking oven according to claim 6, wherein the angle of incline of the first slot is between about 10 and 45 degrees.

8. **(Currently Amended)** The speed cooking oven according to claim 7, wherein the spacing between each slot is along the longitudinal ~~chamber~~ waveguide axis 0.5 of the waveguide wavelength.

9. **(Original)** The speed cooking oven according to claim 8, wherein the second slot is oriented at 90 degrees from the first slot.

10. **(Original)** The speed cooking oven according to claim 9, wherein the third slot is oriented at 90 degrees from the second slot.

11. **(Currently Amended)** The speed cooking oven according to claim 10, wherein each longitudinal ~~chamber~~ waveguide axis is located between about 0.5 and 2.0 inches above ~~each~~ a corresponding cooking rack.

12. **(Currently Amended)** The speed cooking oven according to claim 1, further comprising:

a means for reducing interference between e-fields emitted through slots of ~~opposing waveguide chambers~~ said waveguides.

13. **(Currently Amended)** The speed cooking oven according to claim 12, wherein the means for reducing interference between e-fields is inwardly canted ~~opposing waveguide chambers~~ waveguides.

14. **(Currently Amended)** The speed cooking oven according to claim 12, wherein the means for reducing interference between e-fields is vertically offset ~~waveguide chambers~~ waveguides.

15. **(Currently Amended)** The speed cooking oven according to claim 12, wherein the means for reducing interference between e-fields is slots in ~~opposing waveguide chambers~~ the waveguides that are offset along the longitudinal ~~chamber~~ axes of the ~~opposing waveguide chambers~~ waveguides.

16. **(Original)** The speed cooking oven according to claim 12, wherein the means for reducing interference between e-fields is a control system for selectively adjusting the power outputs of the magnetrons.

17. **(Currently Amended)** A speed cooking oven for cooking a food product by hot gas and microwave energy, comprising:

an oven cavity;

at least one cooking rack;

at least one magnetron for generating microwaves;

at least ~~one~~ two rectangular ~~waveguide chamber~~ waveguides operably associated with the at least one magnetron, the at least one waveguide ~~chamber~~ having a proximal end near the magnetron, an opposing distal end, and a longitudinal ~~chamber~~ waveguide axis;

at least one slot ~~opening in the each~~ waveguide ~~chamber~~ having a center point disposed along a longitudinal slot axis, the center point being located a selected distance from the distal end of the waveguide ~~chamber~~; and

a thin, non-breakable slot cover for sealing the slots;

wherein the at least one slot is configured such that a substantially uniform microwave pattern is achieved without using a mechanical phase-altering device~~[-]~~;

wherein said waveguides are configured for launching microwave energy through respective slots and into the oven cavity from opposing sides of the cavity; and

wherein the oven is operable for launching hot gas into the oven cavity from said opposing sides of the cavity.

18. **(Original)** The speed cooking oven according to claim 17, wherein slot cover is formed from polytetrafluoroethylene.

19. **(Original)** The speed cooking oven according to claim 17, wherein slot cover is formed from a fiberglass material.

20. **(Original)** The speed cooking oven according to claim 17, wherein slot cover is formed from mica sheets.

21. **(Original)** The speed cooking oven according to claim 17, wherein slot cover is adhered to the waveguide by a silicone rubber material.

22. **(Currently Amended)** A speed cooking oven for cooking a food product by hot gas and microwave energy, comprising:

an oven cavity;

at least one cooking rack;

at least one magnetron for generating microwaves;

at least two opposing rectangular waveguides operably associated with the magnetron, each at least one waveguide having a proximal end near the magnetron, an opposing distal end, and a longitudinal ~~chamber~~ waveguide axis;

at least one slot opening in each waveguide having a center point disposed along a longitudinal slot axis, the center point being located a selected distance from the distal end of the waveguide;

wherein the at least one slot is configured such that a substantially uniform microwave pattern is achieved without using a mechanical phase-altering device[-];

wherein said waveguides are configured for launching microwave energy through respective slots and into the oven cavity from opposing sides of the cavity; and

wherein the oven is operable for launching hot gas into the oven cavity from said opposing sides of the cavity.

23. **(Original)** The speed cooking oven according to claim 22, wherein the opposing waveguides are canted inwardly, so as to reduce interference between e-fields emitted through the slots of the opposing waveguides.

24. **(Original)** The speed cooking oven according to claim 22, wherein the opposing waveguides are vertically offset, so as to reduce interference between e-fields emitted through the slots of the opposing waveguides.

25. **(Currently Amended)** The speed cooking oven according to claim 22, wherein the slots in opposing ~~waveguide chambers~~ waveguides are offset along the longitudinal ~~chamber~~ waveguide axes of the opposing ~~waveguide chambers~~ waveguides, so as to reduce interference between e-fields emitted through the slots of the opposing waveguides.

26. **(Currently Amended)** The speed cooking oven according to claim 22, further comprising:

a control system for selectively adjusting the power outputs of the at least one magnetrons.

27. **(Original)** The speed cooking oven according to claim 22, further comprising:

a thin, non-breakable slot cover for sealing the slots of each waveguide.

28. **(Currently Amended)** A speed cooking oven for cooking a food product by hot gas and microwave energy, comprising:

an oven cavity;

at least one cooking rack;

a single magnetron for generating microwaves;

at least two rectangular ~~waveguide chambers~~ waveguides operably associated with the magnetron, the ~~waveguide chambers~~ waveguides having proximal ends near the magnetron, opposing distal ends, and longitudinal ~~chamber~~ waveguide axes;

at least one slot ~~opening~~ in each waveguide ~~chamber~~ having a center point disposed along the ~~respective longitudinal chamber axes~~ a longitudinal slot axis, the center points of said slots in the ~~waveguides~~ being located selected distances from the distal ends of the ~~waveguide chambers~~ respective waveguides, the slots having slot lengths along respective longitudinal slot axes that are less than 0.5 free space wavelength;



wherein the at least one slot in each waveguide is configured such that a substantially uniform microwave pattern is achieved without using a mechanical phase-altering device[-];

wherein said waveguides are configured for launching microwave energy through respective slots and into the oven cavity from opposing sides of the cavity; and

wherein the oven is operable for launching hot gas into the oven cavity from said opposing sides of the cavity.

29. **(Currently Amended)** A speed cooking oven as set forth in claim 1 wherein ~~the oven is operable to use microwave energy and hot gas flow through the oven cavity for cooking the food product~~ further comprising a gas re-circulating system for re-circulating gas through said oven cavity.

30. **(Cancelled)**

31. **(Currently Amended)** The speed cooking oven as set forth in claim 1 wherein the at least one slot ~~opening~~ is inclined relative to the longitudinal axis of the waveguide ~~chamber~~.

32. **(New)** The speed cooking oven as set forth in claim 1 wherein the center point of said at least one slot is disposed along the longitudinal waveguide axis.

33. **(New)** The speed cooking oven as set forth in claim 17 wherein the center point of said at least one slot is disposed along the longitudinal waveguide axis.

34. **(New)** The speed cooking oven as set forth in claim 22 wherein the center point of said at least one slot is disposed along the longitudinal waveguide axis.

35. **(New)** The speed cooking oven as set forth in claim 28 wherein the center point of said at least one slot is disposed along the longitudinal waveguide axis.

36. **(New)** The speed cooking oven according to claim 3, wherein the selected distance of the center point of the first slot is 3.42 inches.

37. **(New)** The speed cooking oven according to claim 7, wherein the spacing between the center points of the first, second and third slots along the longitudinal waveguide axis is approximately 3.42 inches.